

## **REMARKS/ARGUMENTS**

In the Office Action, the Examiner allowed claims 23-29, 56-62, and 71-72 if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 101; rejected claims 68-73 under 35 U.S.C. 101; rejected claims 1-5, 9, 30-33, 35-38, 42, 63-66, and 74 under 35 U.S.C. 102(e) as being anticipated by *Durvaux* et al. (US Pat. 6,449,243); rejected claims 6-8, 10-22, 34, 39-41, 43-55, 67-70, and 73 under 35 U.S.C. 103(a) as being unpatentable over *Durvaux* et al. in view of *Needham* et al. (US Pat. 5,764,699). The rejections are fully traversed below. Reconsideration of the application is respectfully requested based on the following remarks.

Claims 1, 35, 68, 71, 72 and 74 have been amended to further clarify the subject matter regarded as the invention. Support for the amendments can be found in the Specification on page 11, lines 6-16; page 22, lines 4-15; and elsewhere. Accordingly, claims 1-74 remain pending in this application.

### **REJECTION OF CLAIMS UNDER 35 U.S.C. § 101**

Claims 68, 71, and 72 have been amended to address the non-statutory subject matter rejection. Therefore, it is respectfully requested that the rejection to claims 68, 71, and 72 be withdrawn. It is also respectfully requested that the rejection to claims 69, 70, and 73 be withdrawn since they depend from claim 68.

### **ALLOWABLE SUBJECT MATTER**

It is respectfully submitted that claims 71 and 72 are in condition for allowance since they have been amended to overcome the rejection(s) under 35 U.S.C. 101.

### **REJECTION OF CLAIMS 1-22, 30-55, 63-70, 73-74 UNDER 35 U.S.C. §§ 102(e) / 103(a)**

Independent claims 1, 35, 68, and 74 pertain to communications in an access network. Specifically, claim 1 recites among other things “dynamically configuring the Head End to use a second modulation profile for receiving communication signals on the first channel, wherein said dynamically configuring is performed in response to the at least one channel condition change being detected on the first channel, and wherein the at least one channel condition change includes a Forward Error Correction (FEC) factor value change.” Claim 35 recites among other things “the Head End being further configured or designed to dynamically re-configure the demodulation system to use a second modulation profile for demodulating signals received on

the first channel, wherein said re-configuring is performed in response to the at least one channel condition change being detected on the first channel, and wherein the at least one channel condition change includes a Forward Error Correction (FEC) factor value change.” Claim 68 recites among other things “computer code for dynamically configuring the Head End to use a second modulation profile for receiving signals on the first channel, wherein said dynamically configuring is performed in response to the at least one channel condition change being detected on the first channel, and wherein the at least one channel condition change includes a Forward Error Correction (FEC) factor value change.” Lastly, claim 74 recites among other things “means for dynamically configuring the Head End to use a second modulation profile for receiving signals on the first channel, wherein said dynamically configuring means is implemented in response to the at least one channel condition change being detected on the first channel, and wherein the at least one channel condition change includes a Forward Error Correction (FEC) factor value change.”

In contrast, the cited art taken alone or in combination, fail to teach or suggest that “the at least one channel condition change includes a Forward Error Correction (FEC) factor value change”. Although *Durvaux* et al. describes a method that “can be adapted to the transmission quality of the return channel by setting suitable modulation methods for the network terminations”, *Durvaux* et al. merely checks for the quality measurement by examining only the signal-to-noise ratio using preset thresholds. (See column 1, lines 59-62; column 2, lines 59-67) On the other hand, *Needham* et al. merely describes “a method for providing adaptive modulation in a radio communication system” where “the data channel history information stored in the database serves as the basis for the selection of a modulation technique.” (See Abstract; column 6, lines 7-9) *Needham* et al. just describes using either (S/I +N) or the calculated average block error rate as the basis for selection. (See column 6, lines 9-49) Furthermore, as noted by the Examiner, the combination of *Needham* et al. and *Durvaux* et al. fails to disclose the use of “FEC”. Therefore, it is submitted that claims 1, 35, 68, and 74 are patentably distinct from the cited art.

There is also no suggestion or motivation to combine the cited art. Although the Examiner argues that the FEC method is well known in the art for correcting error during transmission, *Durvaux* et al. teaches away from using any method other than examining the signal-to-noise ratio for quality measurement. In fact, *Durvaux* et al. simply discloses a system that “adapts itself automatically to different signal-to-noise ratios on the return channel”. Further, “this adaptation of the digital modulation has the advantage that a simple and low-cost

solution can be installed in each network termination". (See column 3, lines 1-5). As such, this simple and low-cost solution of *Durvaux et al.* teaches away from using a FEC factor value that corresponds to a ratio of a number of corrupted packets received via the selected channel that can be corrected using FEC to a total number of packets received via the selected channel (during a predetermined time interval). (See Specification page 11, lines 10-16) Therefore, it is submitted that claims 1, 35, 68, and 74 are patentable over the cited art.

The Examiner's rejections of the dependent claims are respectfully traversed. However, to expedite prosecution, all of these claims will not be argued separately. Claims 2-22, 30-34, 36-55, 63-67, 69-70, and 73 each depend either directly or indirectly from independent claims 1, 35, or 68 and, therefore, are respectfully submitted to be patentable over cited art for at least the reasons set forth above with respect to claims 1, 35, or 68. Further, the dependent claims recite additional elements that when considered in context of the claimed inventions further patentably distinguish the invention from the cited art. Thus, it is respectfully requested that the Examiner withdraw the corresponding rejections of claims 1-22, 30-55, 63-70, and 73-74 under 35 U.S.C §§ 102(e) or 103(a).

### **SUMMARY**

It is respectfully submitted that all pending claims are allowable and that this case is now in condition for allowance. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

If any fees are due in connection with the filing of this Amendment, the Commissioner is authorized to deduct such fees from the undersigned's Deposit Account No. 50-0388 (Order No. CISCPI72).

Respectfully submitted,  
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